A call to replace classic yellow bus; With diesel harmful to kids, coalition says, going electric would create health, mental benefits

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Body

More and more cars hum, an audible signal of the increasing number of electric vehicles on Canadian roads. But one type still loudly rumbles: the classic yellow school bus.

A coalition of nearly three dozen environment, health and child-welfare groups launched a call to action Thursday to replace Canada's 50,000 diesel-fuelled school buses with electric models, a push they say will have immediate and long-term health benefits - including psychological benefits.

Decades of research has shown that diesel exhaust is a toxic air pollutant, and emerging evidence suggests it can affect brain function and memory. Diesel is also a potent greenhouse gas and children will bear the greatest burden of climate change's consequences. Electrifying school buses will help alleviate these harms, advocates say.

But maybe most of all, turning school buses carbon-friendly will be a powerful symbol of change - a balm for kids' climate anxieties.

"Our young people are worried about their futures. They know about climate change; they know what causes climate change. And each day we're asking them to climb onto a bus that they know is part of the problem," said Erica Phipps, executive director of the Canadian Partnership for Children's Health and Environment.

Replacing diesel buses would show kids "there is hope. The adults in their lives are taking action."

Approximately 2.2 million Canadian children travel on more than 50,000 school buses daily, according to figures cited by the group. The vast majority of those trips are taken on buses fuelled by diesel. A report published last year led by Pollution Probe calculated that of Ontario's 20,000 school buses, only 13 were fully electric as of 2017, with 200 scheduled for delivery by 2026.

Compared to adults, children are especially vulnerable to the harmful health effects of air pollution, Environment Canada has warned. Children breathe more air per kilogram of body weight and spend more time outdoors, and their bodies and lungs are still developing. Children should play as far away from roadways as possible, the ministry said.

School buses drive a source of air pollution directly into a hub of children's daily lives, the call notes.

"These buses pull right up in front of schoolyards, and we've all seen it: buses nose-to-tail, idling," Phipps said. "We're all familiar with the smell of diesel exhaust. This is a common source of important exposure for children and communities across Canada."

A "Human Health Risk Assessment for Diesel Exhaust" published by Health Canada in 2016 notes that enough evidence exists to establish a causal link between exposure to diesel exhaust and both lung cancer and respiratory issues, and there is also evidence linking it to a range of other cardiovascular, immune system and developmental problems.

Emerging evidence has also linked diesel exhaust to cognitive and learning problems. In one study of 25 adults published earlier this year, University of British Columbia researchers exposed study subjects to diesel exhaust and then ran imaging scans of their brains. The short-term exposures had temporary negative effects on brain connectivity, they found.

"It's a huge health risk that we don't really necessarily have at the top of our minds. Certainly the general public isn't aware. I don't think of the health risks of air pollution, but they are there, and children are particularly at risk," said Dr. Samantha Green, president-elect of Canadian Association of Physicians for the Environment and a family physician in Toronto.

In the U.S., studies have shown that people who are racialized or living on low incomes have higher exposures to dangerous air pollution; similar Canadian data is limited, the coalition notes. Phipps said that part of the call for funding to accelerate the replacement of buses is to prioritize communities that are closer to roadways and already have higher pre-existing exposure to air pollution.

Electric school buses are more expensive, and the group is calling on communities, school boards and all levels of government to help fund the transition. Sources of funding exist, but can't cover the entire cost. Canada's Zero Emission Transit Fund, for example, offers $2.75 billion over five years to help public transit and school bus operators plan to electrify their fleets, including buying 5,000 zero-emission buses.

In addition to the effect of air pollution, "the biggest threat to the health of our kids is climate change and the growing climate crisis," Green said. "It's a threat today and of course also a threat in the future. The electrification of the school bus fleet across the country is one step of many that all need to take place to tackle this problem."

Kids are also psychologically affected by climate change. A major global survey of children and young people published in the Lancet Planetary Health in 2021 found that 84 per cent of kids were worried about climate change, and almost half thought about it every day.

"This is like a direct way to address the climate anxiety that children and youth are facing," Green said.

Thursday's call is an initiative of Healthy Environments for Learning Day, run by the Canadian Partnership for Children's Health and Environment, one of the 34 groups behind the push.

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